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特願平11/28462 1999年2月5日(05.02.99) JP(71) 出願人 (米国を除くすべての指定国について)
三菱自動車工業株式会社
(MITSUBISHI JIDOSHA KOGYO KABUSHIKI KAISHA)
[JP/JP]
〒108-8410 東京都港区芝5丁目33番8号 Tokyo, (JP)
(72) 発明者 ; および
(75) 発明者／出願人 (米国についてのみ)
吉岡 祐(YOSHIOKA, Tadashi)[JP/JP]
吉田茂之(YOSHIDA, Shigeyuki)[JP/JP]
澤瀬 薫(SAWASE, Kaoru)[JP/JP]
丹羽貴久(NIWA, Takahisa)[JP/JP]
生島嘉大(IKUSHIMA, Yoshihiro)[JP/JP]
〒108-8410 東京都港区芝5丁目33番8号
三菱自動車工業株式会社内 Tokyo, (JP)

(74) 代理人

真田 有(SANADA, Tamotsu)

〒180-0004 東京都武蔵野市吉祥寺本町1丁目10番31号
吉祥寺広瀬ビル5階 Tokyo, (JP)

(81) 指定国 DE, JP, KR, US

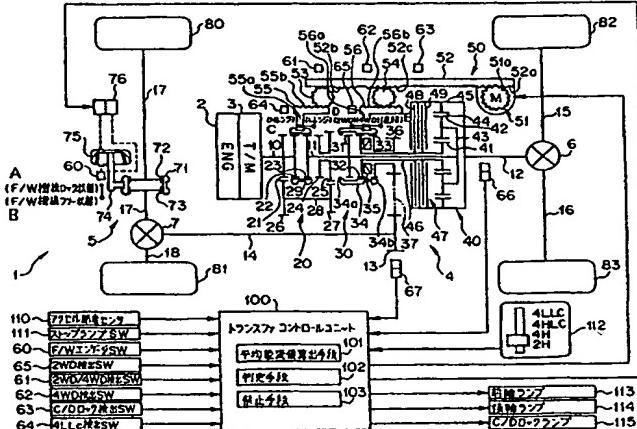
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(54) Title: DRIVING-STATE SWITCHING DEVICE EQUIPPED WITH SYNCHRONIZING MECHANISM

(54) 発明の名称 シンクロ機構付き駆動状態切換装置

(57) Abstract

A driving-state switching device equipped with a synchronizing mechanism switches the driving-state by using the synchronizing mechanism. It comprises a first gear (32) and a second gear (33) that are fixed on the same axis, a gear connecting member (34) adapted to be axially moved to make it possible to connect the first and second gears (32, 33), and a synchronizing mechanism (35) disposed between the first and second gears (32, 33), the arrangement being such that the gear connecting member (34) is moved by a motor-driven actuator (50), whereby the first and second gears (32, 33) are connected together while being synchronized by the synchronizing mechanism (35). At this time, the supply current to the motor-driven actuator (50) is controlled by a control means (100) and the synchronism provided by the synchronizing mechanism (35) is decided by a decision means (102) on the basis of a change in the value of the supply current fed to the motor-driven actuator (50). This enables the decision of the synchronism of the synchronizing mechanism (35) without providing a sensor, a switch or the like for exclusive use and also enables accurate synchronism decision corresponding to individual differences in the slide resistance between members and to a change in the operating state.



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| 60...F/W ENGAGE SW | 110...ACCELERATOR OPENING-DEGREE SENSOR |
| 61...2WD/4WD DETECTION SW | 111...STOP LAMP SW |
| 62...4WD DETECTION SW | 113...FRONT WHEEL LAMP |
| 63...C/D LOCK DETECTION SW | 114...REAR WHEEL LAMP |
| 64...4LLC DETECTION SW | 115...C/D LOCK LAMP |
| 100...TRANSFER CONTROL UNIT | A... (F/W MECHANISM IN LOCKED STATE) |
| 101...MEAN CURRENT VALUE CALCULATING MEANS | B... (F/W MECHANISM IN FREE STATE) |
| 102...DECISION MEANS | C... (H RANGE) |
| 103...INHIBIT MEANS | D... (L RANGE) |
| | E... (2WD) (4WD) (CONNECTION) |